

LD+A

The magazine of the Illuminating Engineering Society of North America

2015 Illumination Awards

August 2015 www.ies.org





Photo: Ema Peter

UP FRONT

- 4 Editor's Note
- 8 In Brief
- 10 Events
- 12 Book Review

THOUGHT LEADERS

- 14 **Willard L. Warren**
The Wild West of LEDs
- 18 **James Brodrick**
A Crash Course in
Color Tuning
- 20 **Nadarajah Narendran**
Quality Over Commodity
- 26 **Paul Pompeo**
Career Boosters

DEPARTMENTS

- 82 Q+A: Miral Kotb
- 84 The Emerging
Professional
- 87 Products @ Work
- 88 Marketplace
- 92 Classifieds
- 93 Ad Index
- 94 New/Sustaining
Members
- 96 IES FYI
- 104 Photo Finish

FEATURES



- 31 **IES ILLUMINATION AWARDS**
Five Awards of Distinction lead this year's
group of projects

72 FAÇADE FRESH

Follow along, as a Toronto office building's exterior goes from dark to dazzling

76 RESEARCH

Adaptive lighting for retail environments

ON THE COVER: A 50-ft diameter skylight oculus ushers daylight into New York City's Fulton Center—one of 19 Final Award recipients recognized in this year's IES Illumination Awards program (p.31). Photo: James Ewing

Façade Fresh

Follow along, as a Toronto office building's exterior goes from dark to dazzling

BY PAUL TARRICONE

Inside the office building at 3 Church Street in Toronto, the warmth of wood columns and beams, operable windows, brick walls and high ceilings provide what property manager York Heritage Properties calls “a charming alternative to conventional office accommodation.”

Outside the building, new façade lighting adds a little bit of nocturnal curb appeal. Even though it's an office building—used primarily during the day—the owner put a premium on nighttime lighting. Michael Cruickshank, partner, York Heritage Properties, explains: “Façade lighting is a meaningful component of improving street ambience, which has become more and more important in the marketing of office space, as the dividing line between peoples' work and personal lives is disappearing,” he says. “Young people now want to live, work and play in the same neighborhood with the result that office buildings in those areas which are 24/7 active have an advantage.”

The façade consists of alternating Toronto red brick and limestone horizontal banding. A series of pilasters contrasting with deep-set window reveals create an undulating appearance along the façade, which is enriched by limestone caps and mullioned windows with limestone sills and lintels.

Lighting designer Deborah Gottesman, Gottesman Associates, Toronto, earned a 2014 IES Illumination Award of Merit for her façade lighting concept. Below, we take you through each step of the process.

THE OLD

From the 1920s to '40s, 3 Church St. was home to H.S. Howland Sons & Co. Limited, a wholesale hardware store that today is part of the Home Hardware chain. The century-old building represents a time when masonry detailing and fine millwork were a building's mark of distinction. Despite its pedigree, no façade lighting existed prior to this project. “Only wall sconces (white globes) at entrances,” says Gottesman.

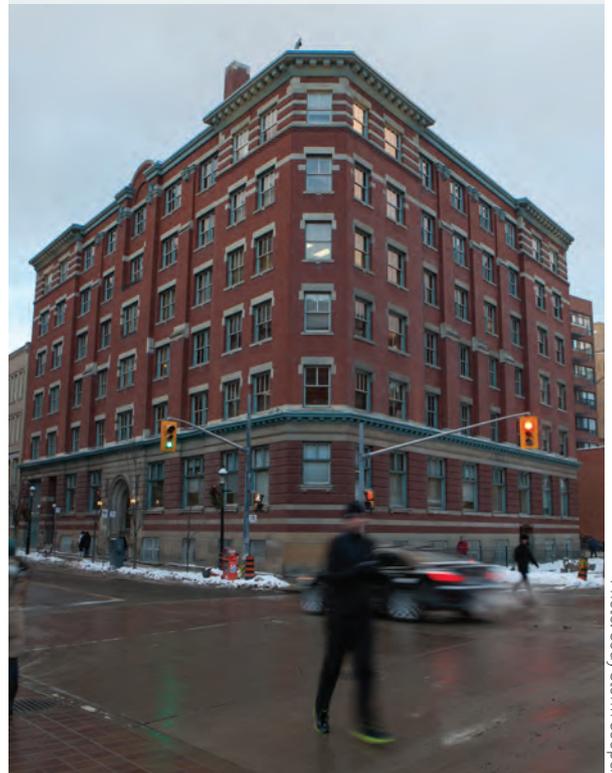
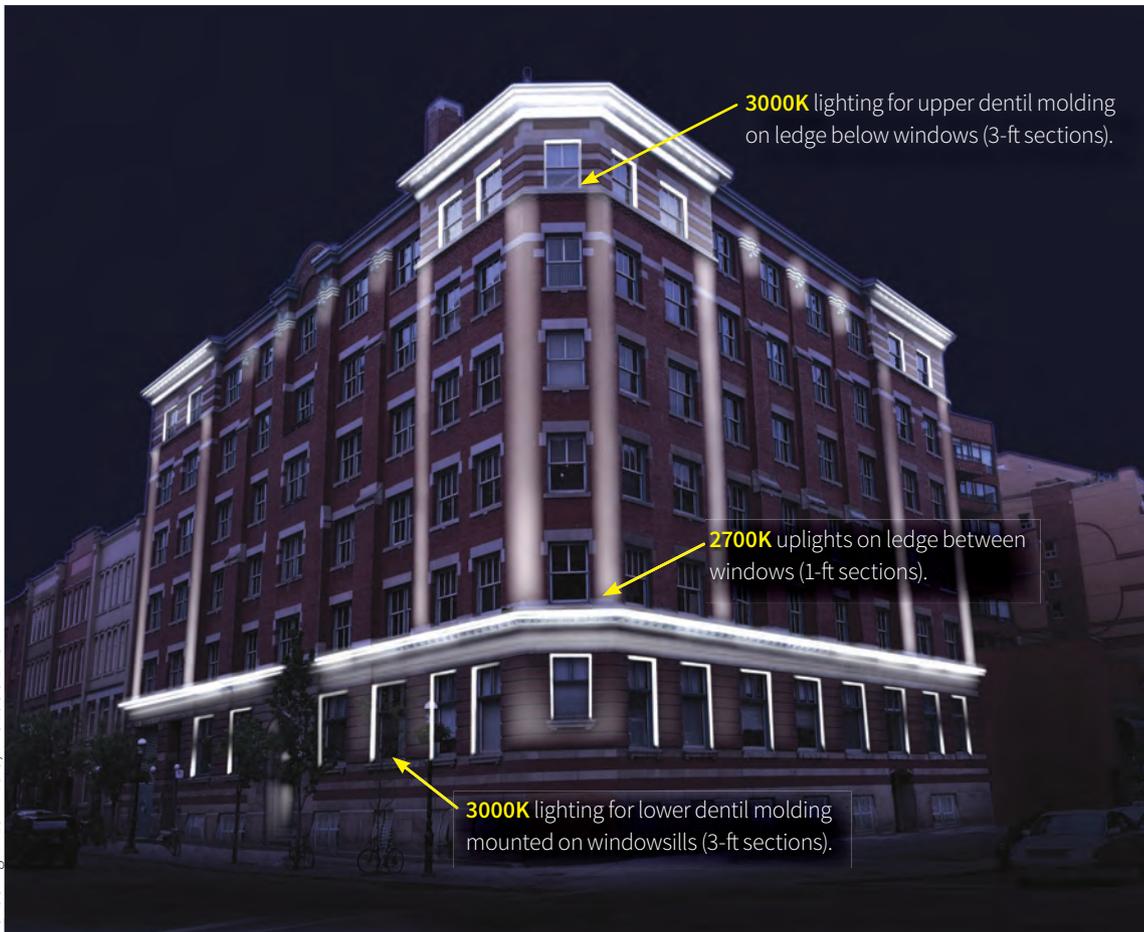


Photo: Cody Storm Cooper



II. THE CONCEPT

Gottesman’s design targeted the dentil molding along the second floor and roof corners, to highlight the building’s most predominant features. Uplight along the brick reinforces building volume.

Two challenges, however, quickly became apparent. First, the surrounding ambient yellow high-pressure sodium streetlights washed out the building’s blue-tone dentil molding. As a result, Gottesman created a mock-up to determine (among other things) the appropriate CCT. Even with the yellow HPS present, “we felt that cool white would be inappropriate for the meticulously maintained historical façade,” she says. “A CCT of 2700K was preferred for the building’s century-old red brick. We nudged the uplighting of the dentil molding to 3000K with high CRI. Good

color rendering, instead of lumens and overlighting, brings out the true color and provides a pop.”

The mock-up served another purpose. “Beyond the obvious of testing the concept, mock-ups inform us of subtleties that can have a big impact,” notes Gottesman. “For example, we played with shifts in color temperature, and evaluated field angles for stray light to respect dark sky principles and occupant comfort at windows. These evaluations were compelling enough for the client to comfortably decide to sole source.”

The second challenge was access to the luminaires and minimizing intervention into the building structure. As a result, all luminaires had to be accessible through windows or by ladder from grade.



Photo: Cody Storm Cooper

III. THE RESULT

The design solution incorporated a new shelf to enable continuous lighting of the façade where no windows existed. LED luminaires (from GVA) were specified after being tested against others during the mock-up. The fixtures vary in output, length and CCT, and the total installation uses only 644 watts.

Asymmetric beam spread enables proper aiming of the windowsill mounted luminaires, avoiding stray uplight, as well as minimizing glare into the windows. “Luminaires and their surface brightness are completely hidden from street view, clandestinely integrated into the architecture,” says Gottesman. “The building is more dignified with its features revealed. The lighting improved its street presence and we still managed

to adhere to codes and standards. This seemingly simple project is an example of the complexity of considerations in lighting design.”

Cruickshank adds, “3 Church Street has always been an architecturally attractive building and is now more visible and interesting after dark. The lighting has enhanced both the building and the streetscape.” □

THE DESIGNER



Deborah Gottesman, MBA, P.Eng., LC, Assoc. IALD, Member IES (1988), is principal with Gottesman Associates, Toronto.